

January 14, 2016

MEMORANDUM TO: John McKirgan, Acting Chief
Licensing Branch 4 (LB4)
Division of New Reactor Licensing
Office of New Reactors

FROM: Jordan Hoellman, Project Manager */RAI/*
Licensing Branch 4 (LB4)
Division of New Reactor Licensing
Office of New Reactors

SUBJECT: SUMMARY OF A PUBLIC TELECONFERENCE ON
NOVEMBER 12, 2015, WITH MEMBERS OF THE AP1000 DESIGN
CENTER TO DISCUSS COMBINED LICENSE REVIEW ISSUES

The U.S. Nuclear Regulatory Commission (NRC) staff held a Category 2 public teleconference with Duke Energy Florida (DEF) and members of the AP1000 design center on November 12, 2015. The purpose of the meeting was to discuss AP1000 combined license (COL) issues associated with the safety review for the Levy Nuclear Plant (LNP) Units 1 and 2 COL application.

The meeting notice can be found in the Agencywide Documents Access and Management System (ADAMS) under Accession Number ML15295A112. The meeting notice is also posted on the NRC's public website. Enclosures 1 and 2 are the meeting agenda and attendance list for the meeting, respectively. The other documents referenced during the discussion can be found at the ADAMS Accession Numbers given below:

- 1) Discussion on staff questions related to Duke's main control room (MCR) Heatup Submittals (VES Dewpoint RAI response) dated 3/26/15 and 10/14/15 – ML15306A130
- 2) Discussion on submittal of exemption request and design change description for departure from AP1000 DCD Revision 19 to address compliance with IEEE 603-1991 – ML15247A153

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Summary of Meeting:

On November 12, 2015, the NRC staff (staff) conducted a public teleconference with representatives from DEF and members of the AP1000 design center to discuss issues to support the safety review for the LNP Units 1 and 2 COL application. Specifically, the meeting addressed the NRC staff's questions related to 1) DEF's main control room (MCR) heatup departure and exemption submittals dated March 26, 2015, and October 14, 2015, and 2) DEF's departure and exemption submittal for compliance with the Institute of Electrical and Electronics Engineers (IEEE) 603-1991.

In the meeting, the first topic discussed was staff's questions related to DEF's MCR heatup submittals. DEF, through the vendor, Westinghouse, provided clarifications to all of the staff's questions. With regards to the cited standard, DEF informed the staff that in their submittal, the 2004 edition of the Compressed Gas Association (CGA) standard is cited. With regards to how the CGA standard is applied, DEF indicated the application of the standard was interpreted to restrict the dewpoint to 10°F lower than that of the coldest temperature in the area although there is no value listed in the table of the standard for moisture content for the air quality used in the MCR emergency habitability system (VES). The staff indicated that the standard does not support DEF's interpretation because the standard clearly states that a blank box (i.e., no value listed in the table) indicates no maximum limiting characteristic. The staff also indicated that if DEF's safety analysis uses or specifies a maximum limiting characteristic, where the standard does not specify a limiting characteristic, then updates to the licensing basis should be considered. With regards to dewpoint temperature discussions, DEF provided two dewpoint temperatures (-22°F and -78°F) at the pressure regulator (i.e., V002A or B), where a considerable pressure drop occurs from an initial VES bottle pressure (e.g., 3800 psi). The staff commented that an understanding of the pressure dewpoint in the VES bottles, which is the source for the control room air, is needed to ensure that the dewpoint values at the pressure regulator can be assessed. With regards to the question related to the maximum VES pressure dewpoint, DEF provided a value of 23°F. DEF stated this maximum pressure dewpoint in the VES system was back-calculated from the -78°F dewpoint temperature. The staff commented that DEF mentioned two dewpoint temperatures (i.e., -22°F and -78°F) and only provided one maximum pressure dewpoint. The staff commented that a higher pressure dewpoint would be associated with the -22°F dewpoint (a depressurized dewpoint) and, therefore, DEF's response to the maximum pressure dewpoint would require clarification. (With regards to planning periodic checks to determine if the air dew point requirement is met, DEF informed that this is addressed in the design specifications; however, the staff noted that there is no requirement specified in CGA standard referenced in the DCD and, therefore, it was unclear if dewpoint testing would occur. With regards to the calculated relative humidity (RH) in the MCR during the 72-hour period following the event, DEF calculated a RH of 40 percent with maximum perspiration and 11 people in the MCR with the VES in operation. The staff noted that the moisture sensitivity analysis available for staff audit assumes that air being delivered to the MCR during VES operation is at a dew point temperature of -78°F and asked DEF to clarify the conservatism of this assumption based on the maximum pressure dew point for the high pressure subsystem, which supplies air to VES system. Staff also noted that the value assumed for moisture supplied from the VES system for the control room in the MCR heatup analysis should be justified based on the design basis information available for the system. DEF stated that humidity calculations for the MCR analysis would soon be available for audit by the staff. DEF also noted that revised responses to requests for additional information (RAIs) 126, 133, and 134, would be submitted before the end of the month.

The second topic discussed related to staff questions about DEF's submittal for an exemption request and departure from AP1000 DCD, Rev. 19, to address compliance with IEEE 603-1991. All of the staff's questions were addressed by DEF. The staff asked for additional clarifications in the description with regards to the 'reset' function of the flux doubling logic below the P-8 permissive. With regards to Technical Specification Bases 3.3.2, the staff asked DEF to clarify the intent of the proposed changes regarding Boron Dilution Block (Engineered Safety Features Actuation Signal (ESFAS) Function 15).

There was no closed portion of the meeting. At the end of the meeting, there was an opportunity for the public to provide comments and ask questions. There were no public comments.

Docket Nos.: 052-018
052-019
052-029
052-030
052-040
052-041

Enclosures:
As stated

cc w/encls: See next page

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 As stated

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NRC-001

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DATE	01/13/16	01/14/16	01/06/2016	01/14/16

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AGENDA FOR TELECONFERENCE MEETING
U.S. NUCLEAR REGULATORY COMMISSION (NRC)

Thursday, November 12, 2015
2:00 p.m. – 4:00 p.m.

PURPOSE: To discuss AP1000 combined license (COL) issues associated with the safety review for Duke Energy Florida's (DEF) Levy Nuclear Plant (LNP), Units 1 and 2 COL application.

OPEN

<u>Time</u>	<u>Topic</u>	<u>Led By</u>
2:00 p.m.	Opening Remarks	NRC
2:05 p.m.	Discussion on staff questions related to Duke's MCR Heatup Submittals (VES Dewpoint RAI response) dated 3/26/15 and 10/14/15	DEF/NRC
2:50 p.m.	Discussion on submittal of exemption request and design change description for departure from AP1000 DCD, Rev. 19, to address compliance with IEEE 603-1991	DEF/NRC
3:50 p.m.	Opportunity for Public Comment	PUBLIC
4:00 p.m.	Meeting Adjourns	

PUBLIC MEETING
UNITED STATES NUCLEAR REGULATORY COMMISSION
Public Meeting with AP1000 Design Center

Thursday, November 12, 2015
2:00 p.m. – 4:00 p.m.

List of Attendees

Purpose: To discuss AP1000 combined license review issues

Name	Organization
Representing the Nuclear Regulatory Commission	
Don Habib	NRO/DNRL/LB4
Jordan Hoellman	
Brian Hughes	
Peter Hearn	
Devendra Pimpale	
John Sagala	NRO/DSRA/SCVB
Boyce Travis*	
Ashley Clinton	
Jack Zhao	NRO/DE/ICE
Hien Le*	NRO/DSRA/SPSB
Malcom Patterson*	NRO/DSRA/SPRA
Marie Pohida	
Christopher VanWert	NRO/DSRA/SRSB
Representing Industry	
Larry Taylor*	Duke Energy (DE)
Ken Pigg*	
Chase Thomas*	
Andrea Cross-Dial*	
Kelvin Montague*	
Jim Thornton*	
Wayne Cutright*	
Ray Mans*	Westinghouse Electric Company (WEC)
Jimmy Hennen*	
Pete Morris*	
Jen Meneely*	
Steve Franzone*	Florida Power and Light (FPL)
Ray Burski*	
Amy Chameralain*	Southern Nuclear Company (SNC)
Neil Haggerty*	
Representing Public	
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*Participated via teleconference

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(Revised 09/22/2015)

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Revised (08/24/2015)

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(Revised 08/24/2015)

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